BECAUSE A KAFIR COULDN'T STAND THE GAFF...

● Man's quest for gold has led him into strange places . . . the frozen lands of the north, the deserts of the south, the bowels of the earth. But from the land of Cecil Rhodes comes an amazing tale of muck and sweat and terrific heat . . . and man's victory over the elements!

The Robinson Deep Mine, Johannesburg, South Africa, is the world's deepest hole—8,500 feet *down!* In those depths is gold, but with temperatures exceeding 100° Fahrenheit and humidities approaching 100%, production reached what seemed to be an impassable barrier. Even the natives couldn't stand the intolerable heat!

What could be done to improve conditions, to increase the efficiency of miners, to permit deeper excavations for gold? The answer was Carrier Air Conditioning!

Into those black depths went Carrier engineers and for 365 days tackled the problems of rock temperature and adiabatic compression of air, both of which go higher as shafts go lower. They studied the excessive humidity; heat from oxidation; heat from human bodies; frictional heat from machinery; and heat from explosives. And from their analysis came the installation of a Carrier Air Conditioning system with a cooling effect equal to 4,000,000 pounds of ice every 24 hours.

Thus again had engineering triumphed in a victory affecting not only production, efficiency and comfort, but one which left its impress on world economics.

There is no limit to the scope of Carrier Air Conditioning—nor to Carrier's further expansion and future accomplishments—except as measured by the number and ability of the young engineers Carrier can bring under the training of the pioneers who have been through the 35 years of the development of the art.

In the Carrier organization, *young* men hold responsible positions—their capacity gauged not by age, but by ability. And whether that ability is fostered best by laboratory research or field work in the far corners of the world, Carrier enables engineers to progress. Today in 99 different countries, you will find evidence of Carrier engineers' contribution to the world's progress!

Carrier
Air Conditioning

During 1937, Carrier trained 300 recent graduates from leading engineering schools in every section of the country. Carrier needs more men. If you had a good school record, and are interested in the world's most fascinating and fastest-growing industry, write us.

CARRIER CORPORATION, SYRACUSE, N. Y.

AN ORGANIZATION OF ENGINEERS

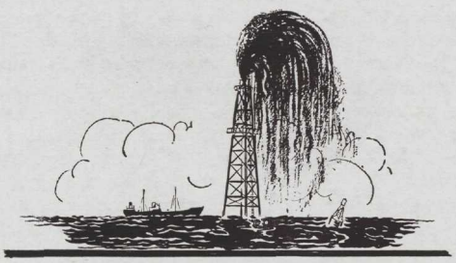
G-E *Campus News*

TEST ALUMNI DAY

TO celebrate the third annual reunion of engineering graduates of General Electric Test, men all over the world gathered in groups to listen to the international radiobroadcast of the reunion at Schenectady, N. Y. Officers and prominent members of P.T.M., or Past Test Men's Association, sent greetings to their fellow Testmen over the General Electric shortwave stations, W2XAD and W2XAF.

More than 15,000 men have graduated from G-E Test—a course which enables them to supplement

their theoretical knowledge with a practical training. Test graduates today hold many responsible positions in the Company. Others have gone into every walk of life—engineers, lawyers, utility executives, farmers, industrial leaders, bankers, and many other professions. There is, however, one tie which binds them all—their experience "on Test," and to many of them that experience is recalled with somewhat the same enthusiasm as days in college.

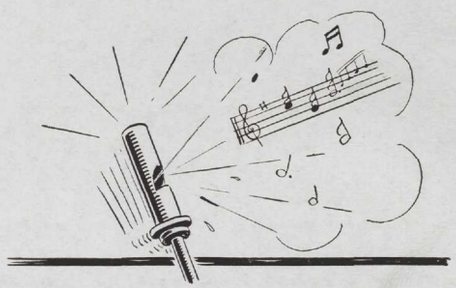


OIL FROM WATER

DOWN on the shores of Lake Maracaibo in the steaming jungles of Venezuela, the Dutch Shell Company owns rights to a fifty-mile frontage. Here it has drilled hundreds of wells to make available the rich oil found in deposits ranging from 1500 to 5000 feet below the lake surface.

The natural gas which accompanies the oil deposits has for years been used to power the wells. In spite of this cheap source of power, General Electric engineers under the supervision of E. E. Thomas, Kansas State '22, were able to convince officials of the Dutch Shell Company that it would be more economical in the long run to use electricity instead of natural gas and gas engines for operating power. As a result, a high-voltage line will be erected along the lake shore, from which step-down transformers will distribute current to the motors in the producing areas.

The Lago Petroleum Company has wells in a section paralleling the Dutch properties and extending ten miles out in the lake, which has already been electrified. The combination of these two companies makes the largest electrified system of its kind in the world, from which 400,000 barrels of oil are shipped daily to refineries in Aruba and Curacao, N.W.I.



WHISTLING GASES

GASES are liquefied to be used as cooling agents and to conserve storage space. Chester W. Rice, Harvard '10, consulting engineer in the Schenectady Works of the General Electric Company, has developed a method of thus processing gases more readily by making them whistle.

To liquefy a gas by this method, it is necessary to compress it to 3,000 pounds per square inch, cool it, and pass it through a series of tubes into a liquefying chamber where the pressure is released through a valve in the form of a whistle, producing a further escape of heat energy. Mr. Rice's whistle is so pitched as to convert the greatest amount of heat energy into sound energy. To be effective, however, the sound energy must be carried away from the liquefying chamber.

Developments such as this are being made by college graduates who were at one time "on Test." Many of them have been off the college campus but a few years and are entering a career in one of the many business and engineering fields in the General Electric Company.

GENERAL ELECTRIC

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